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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/257,585	02/25/1999	SALLY A. LEONG	P98067US	2444

7590

11-05-2002

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EXAMINER

KUBELIK, ANNE R

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 11/05/2002

LO

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/257,585

Applicant(s)

LEONG ET AL.

Examiner

Anne R. Kubelik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9, 11, 13, 14, 16, 25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 11, 13, 14, 16, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received

Attachments

- 1) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 2) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other

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DETAILED ACTION

1. The cancellation of claims 8, 10, 15 and 17 and the amendments to claims 1-4, 6-7, 9, 11, 13-14, 16 and 25-26 requested in Paper No. 18, filed 16 August, 2002, have been entered.

Claims 1-7, 9, 11, 13-14, 16 and 25-26 are pending.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

3. The objection to claims 2-3 and 11 because of informalities is WITHDRAWN in light of amendments to the claims.

4. The rejection of claims 11 and 13-16 under 35 U.S.C. 102(b) as being anticipated by Sweigard et al (1995, Plant Cell 7:1221-1233) is WITHDRAWN in light of amendments to the claims to specify the hybridization and wash times.

5. The rejection of claims 11 and 13-16 under 35 U.S.C. 102(b) as being anticipated by Shimizu et al (1991, Infect. Immunol. 59:137-142) is WITHDRAWN in light of amendments to the claims to specify the hybridization and wash times.

Claim Rejections - 35 USC § 112

6. Claims 1-7, 9, 11, 13-14, 16 and 25-26 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a nucleic acid of SEQ ID NO:1 and bacterial and fungal cells transformed with that nucleic acid, does not reasonably provide enablement for

other sequences.

As such, the specification does not enable any

other sequences.

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person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The rejection is repeated for the reasons of record as set forth in the Office action mailed 10 April, 2002, as applied to claims 1-11, 13-17 and 25-26.

Applicant's arguments filed 16 August, 2002, have been fully considered but they are not persuasive. Applicant urges that the claims 1-7, 9 and 25-26 have been amended to specify that the nucleic acid is isolated from *M. grisea* strain 2539, and because the specification's working examples relate to a DNA fragment from that strain, the claimed invention is fully enabled. Applicant urges that claims 11, 13-14 and 16 are limited to a nucleic acid that by virtue of the hybridization conditions specified has 95% homology to SEQ ID NO:1 and that the claims do not contain functional limitations. Applicant urges that these sequences can be used to detect the expression or presence of AVR1-CO39 genes, to isolate homologs from other *Magnaporthe* isolates, and to produce AVR1-CO39 proteins. Applicant urges that the specification describes these sequences (response pg 10-11).

This is not found persuasive because Applicant has not taught other nucleic acids from *M. grisea* strain 2539 or other sources that hybridize to SEQ ID NO:1 under the conditions listed. As discussed in the prior Office action, Farman et al (2002, Mol. Plant. Microbe Interact. 15:6-16) teach that 39 *M. grisea* isolates completely lacked any version of the AVR-CO39 gene (Table 1) and 5 other *M. grisea* isolates, that when probed with the 1.05 kb fragment showed a strong hybridization signal, were highly virulent on rice cultivar CO-39. Thus, it is not apparent that any *M. grisea* strain other than the one from which SEQ ID NO:1 was isolated has a nucleic acid that confers CO-39-specific virulence.

AVR1-CO39 specific virulence

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As discussed in the prior Office action, expression of fungal avirulence genes in plants can be lethal. Gopalan et al (1996, Plant Cell 8:1095-1105) teach that transformation of the *AvrB* gene into *RPM1* resistance gene-containing *Arabidopsis* cells and plants is lethal (pg 1098, right column, to pg 1099). Applicant provided no working examples in which the AVR-CO39 gene or a nucleic acid encoding SEQ ID NO:2 or 4 was transformed into plant cells to show that this unpredictability has been overcome.

As discussed in the prior Office action, it is not clear that ORF3 (SEQ ID NO:4) is responsible for AVR1-CO39 avirulence function. Farman et al teach that the exact location of the AVR1-CO39 avirulence function had still - almost 4 years after the filing date of the instant application - not been defined (pg 6, right column, paragraph 1).

7. Claims 1-7, 9 and 25-26 remain rejected under 35 U.S.C. 112, first paragraph, as containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The rejection is repeated for the reasons of record as set forth in the Office actions mailed 30 May, 2001, 7 September, 2000, and 10 April, 2002, as applied to claims 1-11, 13-17 and 25-26.

Applicant's arguments filed 16 August, 2002, have been fully considered but they are not persuasive. Applicant urges that the claims 1-7, 9 and 25-26 have been amended to specify that the nucleic acid is isolated from *M. grisea* strain 2539, and because the specification's working examples relate to a DNA fragment from that strain, the claimed invention is fully described. Applicant urges that claims 11, 13-14 and 16 are limited to a nucleic acid that by virtue of the hybridization conditions specifies the AVR1-CO39 gene.

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not contain functional limitations. Applicant urges that the specification thus describes these sequences (response pg 10-11).

This is not found persuasive because the specification does not describe the structural features of other nucleic acids from *M. grisea* strain 2539 that hybridize to SEQ ID NO:1 under the conditions listed in claims 1 or 2.

8. Claims 5-6 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. The rejection is in part repeated for the reasons of record as set forth in the Office action mailed 10 April, 2002, as applied to claims 1-3, 5, 8-9, 11, 15-16 and 25-26; new rejections are due to Applicant's amendments to the claims. Applicant's arguments filed 16 August, 2002, have been fully considered but they are not persuasive.

Applicant urges that the claims have been amended to address all of these rejections (response pg 12-13).

However, the following rejection was not addressed: In claim 5 "having" should be replaced with --of--.

In claims 6 and 13 it is unclear if the cells or the vector comprises the nucleic acid molecule of claim 1 or 11, respectively.

9. Claims 1-7, 9, 11, 13-14, 16 and 25-26 are free of the prior art, given the failure of the prior art to teach or suggest an isolated nucleic acid of SEQ ID NO:1 or nucleic acids from *M. grisea* strain 2539 that hybridize to SEQ ID NO:1.

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nucleic acids that hybridize to SEQ ID NO:1 under the conditions listed in claim 11, and cells transformed with those nucleic acids, and given the unpredictability discussed above.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

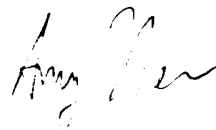
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne R. Kubelik, whose telephone number is (703) 308-5059. The examiner can normally be reached Monday through Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the patent analyst, Kimberly Davis, at (703) 305-3015.

Anne R. Kubelik, Ph.D.
November 1, 2002



AMY J. NELSON, PH.D.
SUPERVISORY PATENT EXAMINER
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